February 5

Chose our idea

The brain has many different parts. This includes the cerebrum, the cerebellum, the frontal lobe, the parietal lobe, the occipital lobe, and the brain stem. Each part is unique and has its function.

The Cerebrum

The cerebrum is the front of the brain and consists of both the right

and left hemispheres and controls coordination, temperature, touch, hearing, reasoning, judgment, learning, and problem-solving.

The Cerebellum

The cerebellum is the portion of the brain that coordinates voluntary muscle movements and it maintains posture, balance, and equilibrium. New studies are exploring the cerebellum’s roles in thought, emotions, and social behavior, as well as its possible involvement in schizophrenia, addiction, and autism.

The Frontal lobe

The frontal lobe is the largest part of the brain. It is involved in personality characteristics, decision-making, and movement. Recognition of smell usually involves parts of the frontal lobe too. The frontal lobe has Broca’s Area which is connected with speech abilities.

The Parietal lobe

The middle part of the brain, the parietal lobe helps one identify objects and understand spatial relationships. It is also involved with interpreting pain and touch. The parietal lobe also has Wernicke’s area which helps the brain understand spoken language.

Occipital lobe

The occipital lobe is the rear part of the brain. It is involved in your vision.

Temporal lobe

Temporal lobes are located on the sides of the brain and are involved in short-term memory, speech, and musical rhythm. They also play a small role in smell recognition.

Brainstem

The middle of the brain, The brainstem connects the cerebrum and the spinal cord. The brainstem consists of the midbrain, the pons, and the medulla.

Midbrain - The midbrain is a very complex structure with a range of different neuron clusters, neural pathways, and other structures. These features facilitate various functions, from hearing and movement to calculating responses and environmental changes. The midbrain also contains the substantia nigra, an area affected by Parkinson’s disease that is rich in dopamine neurons and part of the basal ganglia, which enables movement and coordination.

Pons. The pons is the origin for four of the 12 cranial nerves, which enable a range of activities such as tear production, chewing, blinking, focusing vision, balance, hearing, and facial expression. Named for the Latin word for “bridge,” the pons is the connection between the midbrain and the medulla.

Medulla - At the bottom of the brainstem, the medulla is where the brain meets the spinal cord. The medulla is essential to survival. Functions of the medulla regulate many bodily activities, including heart rhythm, breathing, blood flow, and oxygen and carbon dioxide levels. The medulla produces reflexive activities such as sneezing, vomiting, coughing, and swallowing.

Spinal cord

The spinal cord extends from the bottom of the medulla and through a large opening in the bottom of the skull. Supported by the vertebrae, the spinal cord carries messages to and from the brain and the rest of the body.

Temporal lobe

The temporal lobe is located on the sides of the brain and contributes to memory, speech, and smell.

Feb 26

When alcohol is consumed, the brain goes through certain stages depending on how much was consumed.

Stage 1

Subliminal Intoxication

This is the first stage of intoxication. The consumer now has a BAC (Blood Alcohol Content) of about 0.01 to 0.05. They may not seem like they have been drinking but their reaction time, behavior, and judgment have been slightly altered.

Stage 2

Euphoria

During the early stages of drinking, the body releases more dopamine, the chemical connected to pleasure. The consumer will feel more relaxed and confident. However, their memory and reasoning may be slightly impaired. When the consumer is in the Euphoria stage, they most likely have a BAC of 0.03 to 0.12.

Stage 3

Excitement

At this stage, the consumer is now legally intoxicated. With a BAC of 0.08 to 0.25, this stage affects the occipital lobe, the frontal lobe, and the temporal lobe. Drinking excessively can cause side effects such as blurred vision, slurred speech, and lack of control. The parietal lobe, which processes information is now also affected. The consumer will now have a slower reaction time and a loss of fine motor skills.

Stage 4

Confusion. A BAC of 0.18 to 0.3 often looks like disorientation. Your cerebellum, which helps with coordination, is impacted. As a result, you may need help walking or standing. Blackouts, or the temporary loss of consciousness or short-term memory, are also likely to occur at this stage. This is a result of the hippocampus, the region of the brain that is responsible for making new memories, not working well. You may also have a higher pain threshold, which may increase your risk for injury. If you reach a BAC of 0.25, you may have concerning signs of alcohol poisoning. At this time, all mental, physical, and sensory functions are severely impaired. The risk of passing out, suffocation, and injury is high.

Stage 5

Stupor

If the consumer reaches a dangerously high BAC of 0.25, they may start to show concerning signs of alcohol. At this point, all mental, physical, and sensory functions are severely impaired. The risk for injury, suffocation, and passing out are high.

Stage 6

Coma

At a BAC of 0.35, the consumer is now at risk of going into a coma. This occurs due to compromised respiration and circulation, motor responses, and reflexes. The consumer also faces the risk of death.

Stage 7

Death

With a BAC of over 0.45, the consumer may die due to the lack of control the brain has over the body’s vital functions or due to alcohol poisoning.

A team of researchers from the University of Oxford looked at data from 424 men and 103 women who are participating in the 10,000-person Whitehall Study, an ongoing investigation of the relationship between lifestyle and health among British civil servants. At the beginning of the study in 1985, all of the participants were healthy and none were dependent on alcohol. Over the next 30 years, the participants answered detailed questions about their alcohol intake and took tests to measure memory, reasoning, and verbal skills. They underwent brain imaging with MRI at the end of the study.

When the team analyzed the questionnaires, the cognitive test scores, and the MRI scans, they found that the amount of shrinkage in the hippocampus — the brain area associated with memory and reasoning — was related to the amount people drank. Those who had the equivalent of four or more drinks a day had almost six times the risk of hippocampal shrinkage as did nondrinkers, while moderate drinkers had three times the risk. However, the only link between drinking and cognitive performance was that heavy drinkers had a more rapid decline in the ability to name as many words beginning with a specific letter as possible within a minute.

Mar 8

Did some more research

Long-term drinking causes alterations in the neurons. This can reduce their size.

Misuse of alcohol can lead to blackouts. A blackout is a gap in the consumer's memory when they are Intoxicated. These gaps happen when the consumer drinks enough alcohol that it temporarily blocks the transfer of memories from short-term to long-term storage - known as memory consolidation - in a brain area called the hippocampus.

Continuing to drink despite clear signs of obvious impairments can result in an alcohol overdose. An alcohol overdose occurs when there is so much alcohol in the bloodstream that areas of the brain controlling basic life-support functions—such as breathing, heart rate, and temperature control—begin to shut down. Symptoms of alcohol overdose include mental confusion, difficulty remaining conscious, vomiting, seizure, trouble breathing, slow heart rate, clammy skin, dulled responses (such as no gag reflex, which prevents choking), and extremely low body temperature. Alcohol overdose can lead to permanent brain damage or in extreme cases, death.

Alcohol Use Disorder

The consumer continues to drink alcohol over time, progressive changes can occur in the structure and function of their brains. These changes can compromise brain function and drive the transition from controlled, occasional use to chronic misuse, which can be difficult to control and lead to alcohol use disorder (AUD). Individuals with moderate to severe AUD may enter a cycle of alcohol addiction. The extent of the brain’s ability to return to normal following long-term sobriety is not fully understood, but a growing number of studies indicate that at least some AUD-induced brain changes—and the changes in thinking, feeling, and behaving that accompany them—can improve and possibly reverse with months of abstinence from drinking.